

## I/A Series

# IMV25 & IMV30 Multivariable Transmitters

### Description

These intelligent two-wire transmitters provide precise and reliable multiple measurements.

The Model IMV25 provides measurements of absolute pressure and differential pressure, sensor and electronics temperatures, and process temperature (from an external RTD).

The Model IMV30 adds comprehensive density and flow rate calculations, making it an outstanding mass flowmeter when used with any of a variety of differential pressure-producing primary flow devices.

They utilize digital communications to transmit their multiple measurements and provide a 4 to 20 mA analog output signal assignable to any measurement or calculated value.

### Use Advantages of Digital Communications

The IMV25 allows you to realize the cost savings of multiple measurements communicated digitally via HART and FoxCom protocols and via newer FOUNDATION fieldbus and PROFIBUS protocols as they develop and expand in usage.

### Compensated Flow Rate Measurement

The IMV30 makes flow rate calculations, compensated for changes in process pressure and temperature. Continual calculation of process fluid density allows calculation of mass or standard volume flow rate in the transmitter.

Furthermore, the IMV30 provides full dynamic compensation for all variables affecting the flow rate calculation.

### Easy Configuration

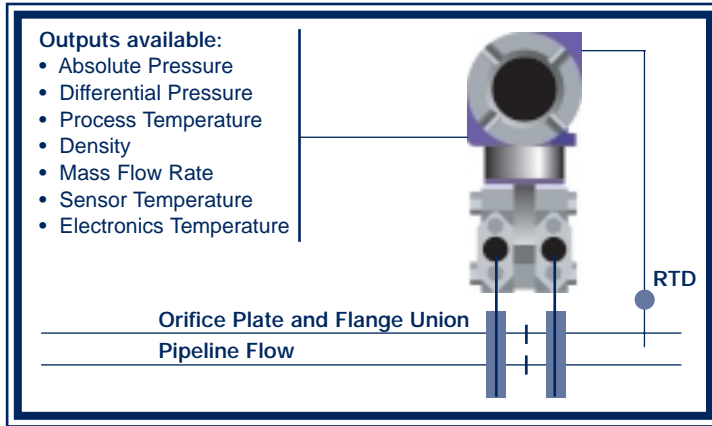
A PC-based configuration software package, Model PCMV, provides easy transmitter setup for both the IMV25 and IMV30 models. When used with the IMV30, it allows selection of primary device type, flow and density equations, pipe and element size and material, fluid properties, and flow rate type (mass, standard volume, or actual volume). It also provides for calibration, digital reading of all variables, diagnostics, and equation test functions.



### Features/Benefits

- Field-proven silicon sensor technology
- Function, performance, and cost breakthrough for superior value
- Digital communications using either HART or FoxCom protocols plus assignable 4 to 20 mA output signal
- One transmitter replaces three separate transmitters, saving on initial purchase costs
- Reduced process penetrations save money and lessen chance of fugitive emissions
- Fewer transmitters, less wiring, and fewer shutoff valves reduce installation costs and provide greater reliability
- Flow rate values from the transmitter (IMV30) eliminate allocation of costly system resources for flow rate calculations
- Reduced cost for fully compensated flow rate measurement (IMV30) means easier justification for compensated measurement, providing better process measurement and control
- Offered in both 316 ss and Hastelloy C materials
- Meets many testing agency requirements for hazardous area installations

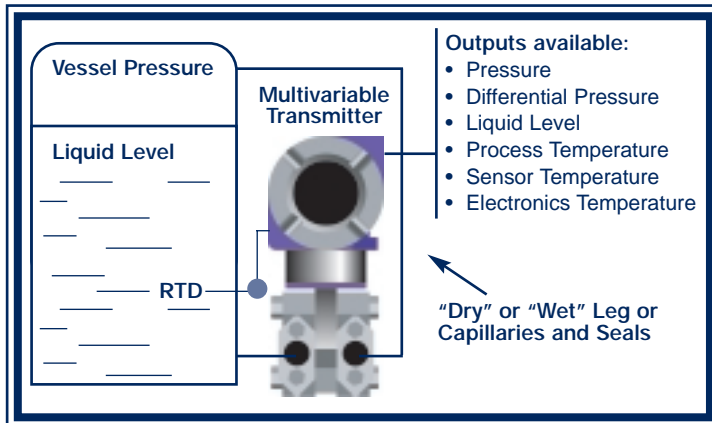
# I/A Series Multivariable Transmitter



IMV30 Mass Flow Rate Application

The IMV30 Multivariable Transmitter may be used for mass flow rate applications. It includes equations for pressure and temperature compensated flow rate calculations involving liquids, gases, and vapors.

The PCMV Flow Configurator Software package is used to configure the transmitter for a specific fluid application.



IMV25 Liquid Level Application

The IMV25 Multivariable Transmitter can be used in a wide variety of applications.

Savings and process efficiency improvements can be realized by having multiple measurements available from a single transmitter.

Liquid level with vessel pressure and temperature is just one example.

Also, refer to the Model IMV31 transmitter for a dedicated multivariable transmitter for level providing highly accurate density-compensated tank level measurement.

## Span and Range Limits for Differential Pressure Measurement

Span Code	Span Limits			Range Limits (a)		
	kPa	inH <sub>2</sub> O	mbar	kPa	inH <sub>2</sub> O	mbar
L(b)	0.12 and 2.5	0.5 and 10	1.2 and 25	-2.5 and +2.5	-10 and +10	-25 and +25
A (b)	0.75 and 7.5	3 and 30	7.5 and 75	-7.5 and +7.5	-30 and +30	-75 and +75
B (c)	0.5 and 50	2 and 200	5 and 500	-50 and +50	-200 and +200	-500 and +500
C (c)	2.5 and 210	10 and 840	25 and 2100	-210 and +210	-840 and +840	-2100 and +2100

## Span and Range Limits for Absolute Pressure Measurement (d)

Span Code	Span Limits			Range Limits		
	MPa	psia	bar or kg/cm <sup>2</sup>	MPa	psia	bar or kg/cm <sup>2</sup>
D	0.02 and 2.1	3 and 300	0.21 and 21	0 and 2.1	0 and 300	0 and 21
G	0.07 and 3.4	10 and 500	0.7 and 34	0 and 3.4	0 and 500	0 and 34
E	0.21 and 10	30 and 1500	2.1 and 100	0 and 10	0 and 1500	0 and 100

(a) Positive values indicate HI side of sensor at the high pressure, and negative values indicate LO side of sensor at the high pressure.

(b) Available with AP Span Code G.

(c) Available with AP Span Codes D and E.

(d) Absolute pressure measured directly: gauge pressure calculated from user-entered barometric pressure constant.

Performance — See Product Specification Sheets PSS 2A-1C15A (IMV30) and 2A-1C15B (IMV25) for complete specifications.

Accuracy: DP & AP ±0.05% span

Flow rate ±1.0% rate

Stability ±0.05% upper range limit per year



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